

**REMARKS**

Claims 1-56 are pending after entry of this paper. Claims 1-3, 5, 7, 8, 11, 12, 15, 30, 31, 33, 35, 36, 39, 40, 42, and 44-47 have been rejected. Claims 4, 6, 9, 10, 13, 14, 16-29, 32, 34, 37, 38, 41, 42, and 48-56 have been withdrawn. Applicants reserve the right to pursue withdrawn claims in a divisional or continuing application.

Claims 1, 2, 15, and 39 have been amended to add the phrase “wherein the predetermined criterion comprises a measurement of a contact angle.” Support may be found throughout the instant specification, for example, at page 34 of the specification as filed.

No new matter has been introduced by these amendments. Reconsideration and withdrawal of the pending rejections in view of the above claim amendments and below remarks are respectfully requested.

**Response to Rejections under 35 U.S.C. §103**

Claims 1-3, 5, 7, 8, 11, 12, 15, 30, 31, 33, 35, 36, 39, 40, 42 and 44-47 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Okamoto et al. (*Nature Biotechnology*, 18:438-441, 2000), (“Okamoto”), in view of WIPO Application Publication No. WO 99/39817 to Rava et al. (“Rava”) and further in view of U.S. Patent No. 6,839,454 to Park et al. (“Park”). Specifically, the Examiner contends that Okamoto allegedly teaches a method comprising every step of claim 2 except Okamoto is silent about step (j-1) of inspecting the carrier after the surface treatment, which according to the Examiner is made obvious by Rava. The Examiner further points to Park to ascertain that step (j-3) of inspecting state of the

deposition is obvious. Applicants respectfully disagree with Examiner's characterization and conclusion.

Okamoto teaches a method for the generation of microarrays using the bubble jet variation of ink-jet technology. Specifically, Okamoto teaches ejecting oligonucleotides purchased from Amersham onto a quartz substrate that was cleaned with detergent, rinsed, and treated with aqueous solution of N-aminoethyl-aminopropyl-trimethoxysilane to form a covalent link between the oligonucleotides and the substrate in an array. (Okamoto, pg. 441; 1st col.). According to the Examiner, Okamoto does not teach performing a quality control of a carrier or the fabricated microarray with a probe, which is made obvious by Rava and Park. Rava teaches a method of quality control in manufacturing at intermediate stages. Specifically, as noted by the Examiner, Rava teaches testing of substrates after they are coated with xilane but before attachment of oligonucleotides (pg. 17, lines 9-14). Park, on the other hand, teaches a method for quantitatively processing a plurality of nucleic acid species expressed in a microarray to account for any inherent inconsistencies and errors in the array generation process. Park further teaches the quality measurements of a fabricated DNA microarrays. (col. 18-20).

Contrary to the Examiner's contention, applicants respectfully assert that Okamoto alone, or in combination with Rava and Park, does not disclose each and every step of the claimed method. However, in order to expedite prosecution and without disclaimer of or prejudice to the subject matter recited therein, applicants have amended claims 1, 2, 15, and 39 to add the phrase "wherein the predetermined criterion comprises a measurement of a contact angle." Applicants respectfully submit that neither Rava, nor Park remedy the deficiencies of Okamoto because none of the cited references discloses a step of judging the state of surface treatment based on contact angle. Accordingly, Okamoto, Rava, and Park – whether alone or in

combination – fail to teach, disclose, or suggest each and every element of claims 1, 2, 15, and 39 as presently amended. At least for this reason, applicants respectfully request reconsideration and withdrawal of the §103 rejection to claims 1-3, 5, 7, 8, 11, 12, 15, 30, 31, 33, 35, 36, 39, 40, 42 and 44-47.

#### Dependent Claims

The applicants have not independently addressed all of the rejections of the dependent claims. The applicants submit that for at least similar reasons as to why independent claim(s) 1, 2 and 15 from which all of the dependent claims 3, 5, 7, 8, 11, 12, 30, 31, 33, 35, 36, 39, 40, 42 and 44-47 depend are believed allowable as discussed *supra*, the dependent claims are also allowable. The applicants however, reserve the right to address any individual rejections of the dependent claims and present independent bases for allowance for the dependent claims should such be necessary or appropriate.

Thus, applicants respectfully submit that the invention as recited in the claims as presented herein is allowable over the art of record, and respectfully request that the respective rejections be withdrawn.

#### CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application. Favorable action by the Examiner is earnestly solicited.

**AUTHORIZATION**

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **50-4827**, Order No. 1004288.61530.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **50-4827**, Order No. 1004288.61530.

Respectfully submitted,  
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